Order-No.: DD+DIS334.00E

1 Piece UJHSB MA1

January 2001

ADC System Components

Processing Station

Modification Instructions

Please file this document in section 10
of your Technical Documentation ADC System

Upgrade from VIPS.1.0.09 to VIPS.1.1.09
and
Upgrade from VIPS.1.1.05 to VIPS.1.1.09

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Appendix A: Processing Station connection diagram

printed in Germany

1 General Information

1.1 Software Prerequisites

ADC Compact Digitizer:	≥ COP1215,
ADC Solo Digitizer:	≥ SOL1108
PRID (Preview & Identification SW):	≥ PRID1.1.07

1.2 Main Changes in VIPS.1.1.09*

- collimation frame: white instead of black
- display images correctly when first loaded into smart print
- annotation problem fixed
- measurements on HR FL/FS fixed
- print / sent flag for FL/FS fixed
- sent flag for hold fixed
- image rotation possible on workstation for low memory non-MG3 printers
- collimation problem fixed
- printer definition file installation via maintenance menu

* For further details see points 3, 4, 5, and 6 of this document.

1.3 Hardware Prerequisites

The experience has shown that 128 MB RAM is the absolute minimum for the Processing Station. However, for a good performance (UI speed, UI stability) 192 MB RAM memory is recommended. The Processing Stations coming from AGFA are equipped with 256MB RAM. This guarantees that the Processing Stations are working well with SW-Options with high RAM utilization (e.g. ADCC Full leg / spine SW) as well.
The system is only tested with 27 GB hard disk space for images. AGFA does not guarantee a smooth working if more hard disk space for images is used.
As the swap space has been increased at least a 2 GB HD is needed to store the Operating System and the Application plus approximately 180 images.

1.4 Released Options

So far the following options have been released:

OPTION	Released	New in VIPS1109/PRID1111
Interactive processing SW	Yes	No
ADCC Autorouting SW	Yes	No
ADCC Uro Tomo SW	Yes	No
ADCC Pediatric SW *	Yes	Yes
ADCC Dental SW *	Yes	Yes
ADCC Full leg / spine SW	Yes	No
ADCC Smart Print SW **	Yes	No
ADCC Annotation SW	Yes	No
ADCC Black Border SW	Yes	No
ADCC Dose Monitoring SW	Yes	No
ADCC Auto QC SW	Yes	No
ADCC Dicom Store Connection SW	Yes	No
ADCC Softcopy Toolkit SW	Yes	No
PS5000 upgrade to ADCC	Yes	No
ADCC PRID on UNIX SW	No	No

* To add exams for this licenses, you have to use CCM 1.1.04 or higher.

** The former options “ADCC Overview Printing SW” and “ADCC Slide Printing SW” are replaced by one Software package “ADCC Smart Print SW”

1.5 Release Environment

These versions on the hardcopy devices and the IMPAX Stations (and subsequent releases respectively) guarantee that all functions on the Processing Station are supported properly. Other combinations have not been tested and may result in restrictions in functionality.

LR5200	≥ LTP01901
LR5200 Controller	≥ AOS32946 /C ≥ CAD32946 /C ≥ ECU32947 /C
DICOM	≥ DCM2.3.4/C
IMPAX	≥ R3.5_v.2.4.0/C

1.6 Performance - Image Input Rate

A Processing Station can handle an input of 140 images scanned with standard resolution. This means that one Processing Station is able to handle two ADC Compact Digitizers at full load under the following conditions:

- The images are standard resolution.
- There are not more than 27GB memory space for images hooked to the Processing Station.
- Only the “Online Hardcopy” output is used.

It is also possible to connect maximum three ADC Compact Digitizers to one Processing Station. However, this reduces the possible workload on each digitizer accordingly. It is not recommended to connect more than three Digitizers to one Processing Station.

1.7 Scope of delivery Software Kit VIPS.1.1.09

Order No.: EB+44060722

2	CD ROM:	MIMOSA VIPS1.1.09 + MIMOSA OS AGOS.A.0.6.03
1	Floppy disk	Upgrade support floppy
1	Floppy disk	Language disk LNG1.0.05 for the (V)DIPS Software ≥ DIPS1.0.03
1	Floppy disk	Empty disk, necessary for the upgrade procedure
2	DAT-tapes	Necessary for the backup of the system disk
5	Floppy disks	CCM tool version 1.1.05
1	Floppy disk	ADB configuration tool with documentation
1	Floppy Disk	Printer definition files
1	Documentation	Upgrade procedure
1	Documentation	Printer definition files installation

1.8 Required Time for the Upgrade

The upgrade itself takes max. 90 minutes (depends strongly on the speed of the CD ROM drive). The upgrade can be done with or without saving and restoring the images from the System Disk. It takes about 50 minutes / 100 images to save them to and restore them from DAT-tape (calculated with an average image size of 5.9MB).

Example for a 2.1GB system disk:
90 min for mere upgrade + 100min for 200 images = 190min = 3hours 10min

Example for a 4.2GB system disk:
90 min for mere upgrade + 260 min for 520 images = 330min = 5hours 30min

Reduce the upgrade time as far as possible. Remove all the images (also OFLS) the customer does not need any more on the Processing Station.

1.9 Useful Accessories

Cleaning tape
DAT-tape Necessary if “Offline” images have to be saved.

For detailed information on Smart Print option and ADB tool, please refer to the upgrade instructions of VIPS 1.1.05 (Section 10; chapter 2.6 of your technical documentation DD+DIS198.00E)

2 Upgrade Procedure

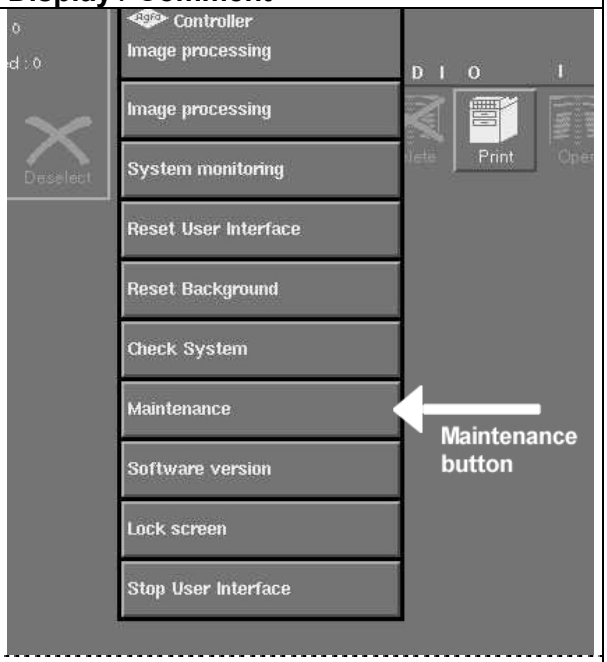
2.1 Preparing Actions

Steps 1 – 4 are only necessary if the images on the system disk are needed again after the upgrade.

No.	Procedure Steps	Display / Comment
1.	Insert cleaning tape into DAT-tape drive and wait until it is ejected again.	
2.	As the backup of the images can take very long (approx. 25min/100images) remove no more needed images from the Processing Station	
3.	Check if the DAT-tape drive is accessible: • Switch on DAT-tape drive • go to **Maintenance**, enter password and hit **<Return>** Type: **4** to select **Tools** and hit <Return> **1** to select **Terminal** and hit **<Return>**	A new terminal window appears.
4.	Enter **mt -f /dev/rmt/0lb rewind** in the terminal window.	If you get no response and just return to the prompt everything is ok. If you get the response "No tape loaded or drive offline" everything is ok. If you get the response "No such device or address" the DAT-tape drive is connected on the wrong SCSI connector on the rear of the Processing Station. Please shut down the Processing Station and connect your DAT-tape drive

If the DAT-tape drive is not connected to the correct SCSI port, the backup and restore of the images will fail.

5.	Save "Offline images" to DAT-tape. If they are not needed anymore skip this step. Time to save is approx. 25 minutes / 100 OFL images.	

No.	Procedure Steps	Display / Comment
6.	go to **<Maintenance>**, enter password and hit `<Return>`	
7.	Select: **3** to select **Repair** and hit `<Return>` **6** to select **ImportExport** and hit `<Return>` **4** to select **DirList** and hit `<Return>`	
8.	Insert an empty DAT-tape into the DAT-tape drive. Make sure that the write protection is off on the DAT-tape	
9.	Select: **5** to select **Save** and hit `<Return>` **q** to exit this menu and hit `<Return>`	
10.	Check and write down the current hostname, current ip-address and netmask of the Processing Station. This data will be needed during the software upgrade.	
11.	go to **<Maintenance>**, enter password and hit `<Return>`	
12.	Select: **3** to select **Repair** and hit `<Return>` **4** to select **SystemInfo** and hit `<Return>`	

No.	Procedure Steps	Display / Comment

13.	Move to the section "`Workstation Networking Environment`" in the system information. The following information should appear:	....
		`----- Workstation Networking Environment -----`
		`Workstation : vips220 192.9.200.220`
		`Broadcast : - 192.9.200.255`
		`Netmask : - 255.255.255.127`
		....

14.	Write down the Hostname of the Processing Station (= Workstation) (in the above example "**`vips220`**").	
15.	Write down the IP address of the Workstation (in the above example "**`192.9.200.220`**").	
16.	Write down the Netmask of the Processing Station (in the above example "**`255.255.255.127`**"). ☞ This field maybe empty if no subnetting is done.	
17.	Select: **q** to exit this menu and hit **`<Return>`**	

☞ Steps 18 - 25 are only required with version MIMOSA DIPS1.0.03. They are not needed if version MIMOSA VIPS1.0.05 or higher is installed on your Proc. Station.

18.	Insert the "UPGRADE SUPPORT" floppy"	
19.	go to **<Maintenance>**, enter password and hit **`<Return>`**	
20.	Select: **4** to select **Tools** and hit **`<Return>`** **7** to select **FloppyDir** to mount the floppy and hit **`<Return>`** **1** to select **Terminal** and hit **`<Return>`**	A new terminal window appears
21.	Enter **`/floppy/floppy0/install.csh`**	`OK to continue`
22.	Enter **`yes`**	
23.	Enter **`eject floppy`** in the terminal window	
24.	Enter **`exit`** in the terminal window	
25.	Select: **`q`** to exit this menu and hit **`<Return>`**	

2.2 Upgrade VIPS 1.1.09

No.	Procedure Steps	Display / Comment
1.	go to **<Maintenance>**, enter password and hit **<Return>**	
2.	Select: **2** to select **Install** and hit **<Return>** **2** to select **Software** and hit **<Return>** **3** to select **Upgrade** and hit **<Return>**	If the question „Remove all OFL-files" appears answer it with **yes**

Step 3 can be skipped if the current images are not needed anymore after the upgrade.

3.	Insert an empty DAT-tape into the DAT-tape drive and wait until the green LED on the DAT-tape drive stops flashing.	Enter "yes" if the current images are still needed after the upgrade. Saving images to DAT-tape can take very long (approx. 25min/100images). Enter "skip" if the current images are not needed anymore after the upgrade. Ok to continue [yes, no, ?, q]:
4.	Enter **yes**	SaveArea backup on floppy or tape [floppy, tape, ?, q]:
5.	Enter **floppy**	Put floppy into drive and hit <return>:

Do not enter "tape" → Due to a software bug this crashes the upgrade procedure.

6.	Hit **<Return>**	Ok to reboot from cdrom [yes, no, ?, q]:
7.	Enter **yes**	
8.	Insert the CD ROM with AGOS.A.6.03 into CD ROM drive	Mount bootable CDROM
9.	Hit **<Return>**	
10.	Booting from CD ROM takes about 5 minutes	
11.	Select: **2** to select **Install** and hit **<Return>** **2** to select **Software** and hit **<Return>** **3** to select **Upgrade** and hit **<Return>**	Use the floppy as JumpStart floppy [yes, no, ?, q]:

No.	Procedure Steps	Display / Comment
12.	If the floppy is still in the drive, enter **no**	`Install O.S. software from ./SYSTEM/ AGOS.A.6.01 [yes,no,?,q]:`
13.	Enter **yes**	The Solaris installation program starts now. The `Solaris Installation Program` window appears
14.	Hit **<Continue>**	The `Identify This System"` window appears
15.	Hit **<Continue>**	The `Hostname` window appears
16.	Enter the old hostname and hit **<Continue>**	The `Network Connectivity` window appears
17.	Hit **<yes>** and hit **<Continue>**	The following window appears only with ULTRA SPARC 1 hardware and if a fast ethernet board is installed. Here you can choose between hme0 **(**= 100mbit/10mbit auto sensing) or le0 (= 10 mbit onboard). We recommend to select hme0. The `Primary Network Interface` window appears
18.	Select **<hme0>** and hit **<Continue>**	The `IP Address"` window appears
19.	Enter the old ip_address and hit **<Continue>**	The `Confirm information` window appears
20.	Check if the entries are correct and confirm by hitting **<Continue>.**	The `Subnet` window appears
21.	Hit **<no>** . If subnetting is used hit **<yes>** and then enter the old subnetmask. hit **<Continue>.**	The `Time Zone` window appears
22.	Hit **<Geographic region>** and hit **<set>**.	The `Geographic region"` window appears
23.	Select **<Local Region>** and **<Time zone>** and hit **<Continue>.**	The `Date and Time` window appears
24.	Modify **<Date>** and **<Time>** if not correct. and hit **<Continue>.**	The `Confirm information"` window appears
25.	Check if the entries are correct and confirm by hitting **<Continue>.**	Successful system configuration is confirmed by the message `"System identification is completed."`

Now the Solaris operating system files are copied to the Processing Station. After about 15 minutes it will be rebooted automatically. After a few minutes the following message is displayed.

```
Please log on as root and enter:
/mimosa.install
```

No.	Procedure Steps	Display / Comment
26.		`Hit <return> to continue`
27.	Hit **`<Return>`**	`vips220 console login:`
28.	Enter **`root`**	`Password:`
29.	Enter password	
30.	Enter newfs –i 16384 –m 2% /dev/rdsk/c0t0d0s7	On the query `Construct a new file system /dev/rdsk/c0t0d0S7 (y/n)?`
31.	Enter **`yes`**	
32.	Enter **`/mimosa.install`**	`OK to run with option upgrade[yes, no, ?, q]:`
33.	Enter **`yes`**	installation takes about 15 – 20 min.

If you want to restore the old images, insert the backup DAT-tape into the drive now (if not already in) and wait until the green light stops flashing.

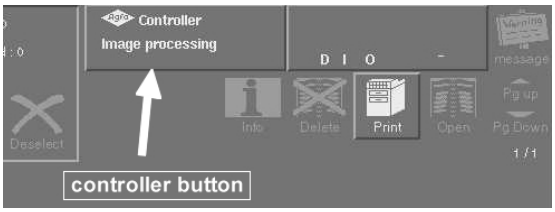
34.		`Restore directory /images from tape [yes, no, ?, q]:`
35.	If you want to restore the old images enter **`yes`** If you do not need the old images anymore enter **`no`**	
36.	Enter **`yes`**	`Install SW from ./MIMOSA/VIPS1109[yes, no, ?, q]:`
37.	Insert CD ROM with **VIPS 1.1.09**	

Steps 38 and 39 appear only if under step 35 the old images from the backup DAT-tape have not been restored.

38.	Insert the floppy with SaveArea backup.	`Choose a SaveArea [?, ??, q]:`
39.	Enter **2** to select **`floppy`**	

Don't enter "`tape`" → Due to a software bug this crashes the upgrade procedure.
Now the ORACLE database files, MIMOSA application files are copied to the Processing Station and the MIMOSA software is initialized with the old configuration data. This takes about 20 minutes

40.		`Ok to reboot:`
41.	Enter **`yes`**	
42.	The Processing Station reboots once again and starts up with the MIMOSA User Interface.	

No.	Procedure Steps	Display / Comment
43.	If the old images do not appear, run a **<Check System>** via the controller button in the MIMOSA User Interface. It can take a while until the new images will show up.	
44.	Eject the DAT-tape and the floppy	

2.3 Installation of the Language Files

With this upgrade the language files are not saved. Therefore they have to be reinstalled.

No.	Procedure Steps	Display / Comment
1.	go to **<Maintenance>**, enter password and hit **<Return>**	
2.	Insert language disk	
3.	Select: **2** to select **Install** and hit **<Return>** **7** to select **Languages** and hit **<Return>** **1** to select **CopyLanguages** and hit **<Return>** **4** to select **FloppyEject** and hit **<Return>**	All Language files will be loaded.
4.	Remove the floppy	
5.	Exit **<Maintenance>**	
6.	Reset the MIMOSA User Interface to get it in the language you had before the upgrade.	

2.4 Finish Upgrade

To finish the upgrade, a customer specific backup has to be made on an empty floppy.

No.	Procedure Steps	Display / Comment
1.	go to **<Maintenance>** and hit **<Return>**	
2.	Insert an empty floppy disk Select: **2** to select **Install** and hit **<Return>** **10** to select **Backup** and hit **<Return>** **1** to select **SiteSpecific** and hit **<Return>**	`Save Area backup on floppy or tape [floppy,tape,?,q]:`
3.	enter **f** for floppy	
4.	After the backup is finished hit **q** to quit.	
5.	Hit **q** again	
6.	Select: **4** to select **Tools** and hit **<Return>** **8** to select **FloppyEject** and hit **<Return>**	
7.	Remove floppy from floppy drive	
8.	Hit **q** to quit Tools menu	
9.	Exit **<Maintenance>**	
10.	Label floppy with backup with the following data and store it in a save place:	

Site specific backup of <*hostname*>	
For Version:	VIPS1109
Name:	<*Your Name*>
Date:	<*Current date*>

2.5 Installation of the "Printer Definition Files"

For the installation of the printer definition files, please see DD+DIS012.01E (part of delivery upgrade kit)

3 Solved Problems from VIPS.1.0.09 to VIPS.1.1.09

- Print / sent / archived flag set correctly.
- Screensaver settings are only defined by means of the cpf-file now. Solaris settings do not interfere any more.
- Problems of "jagged white line" and "black reduced images" are solved by a new collimation algorithm. This also increases the reliability of the collimation algorithm.
- The number of images in the system module always remained "0", no matter if the system was fresh installed or has been used for several days. The algorithm for counting the available images is correct now.
- Sometimes the Print Preview on the Processing Station and the actual deviated from each other. This is solved now.
- Printing / sending of an image with annotations failed. The image was printed without the annotations. This is solved now.
- In some languages the date was followed by a ">". This is solved due to a new Solaris operating system.
- There was no study date filled in into corresponding DICOM field for full leg / full spine examinations. The study date is now filled in correctly.
- Sometimes it was not possible to install UPS software. Now, the UPS software is a part of the MIMOSA release again.
- If the collimation shape "circle" is moved out of the left image border it works OK as well now.
- Printing 30x15 cm cassettes through on-line channel gave minimized images on film. This is solved now.
- After selecting three images and changing the distance between them in "full leg / full spine" software the stitching and annulment buttons were no longer visible. After selecting white images (unexposed for test) the UI crashed. This is solved now.
- When attempting to print a zoomed image and the zoomed area was at the borders of the image the printing crashed. The hard copy was not printed. This did not occur if the zoomed area was in the center or nearby. The problem occurred only with 15 x 30 cm cassettes.
- On systems on which a lot of manually deleted images existed it could happen that the images in the wastebin got a negative number. Autodelete then was not able to delete the images. This is solved now.
- If images were sent through the on-line channel, and could not be delivered successfully, it could block the transmission from the Digitizer to the Processing Station as well. A time-out (default: 5min) has been introduced which can be configured by means of the DICOM_SEND_TIMEOUT_DEFAULT in the cpf-file.
- Statistics in the Infocounter were not correct. Wrong calculations in the Infocounter are corrected now.

The following item is more likely based on misunderstanding than on a software problem:

- Umlaut letters are sorted after "z" in the patient list. Sorting happens according to the installed language. So, as soon as you switch from normal mode to service mode, sorting is done according to the English Language.

4 Solved Problems from VIPS.1.1.05 to VIPS.1.1.09

- collimation frame: "white instead of black" problem fixed
- "detection of best-fit non-MG3 film format" problem fixed
  with unknown film formats the system automatically selects a similar MG3 format.
- "failed online print jobs not transmitted to background for non MG3", problem fixed
  Printing on non-MG3 printers failed when hold flag was set; if printing through online channel failed, the print job was not re-submitted; a manual resent was necessary.
- display images correctly when first loaded into smart print
  a wrong scaling applied to images loaded in smart print because of a misfit of film layouts
- several fixes in the smart print UI
- MG3-layouts scale to fit on non-MG3 printers
  Film layouts for non-MG3 printers offering an MG3-filmsize are now also resized, because there are small differences in film size.
- "IRC_Controller obscuring buttons" problem fixed
- smart print icons do what they are supposed to do
- "non-MG3 dose monitoring" problem fixed
  non MG3 printers did not print the dose monitoring bar into the text field.
- date format DD/MM//YYYY allowed
  the double slash (used in some countries) can be set now.
- annotation problem
  workaround: try to contact virtual frame buffer three times, then switch to regular buffer; this reduces the appearance of the annotation problem drastically.
- "measurements on HR FL/FS" problem fixed
  measurements on full leg/full spine are correct now.
- "print / sent flag and hold flag for FL/FS" problem fixed
  the print/sent flag for full leg/full spine and images with hold status is set correctly now.
- "N-DELETE" problem fixed
  when sending to Solid InkJet a DICOM error message appeared, although the image was sent.
- "printer configuration files not being read" problem fixed
- "line under images in browser" problem fixed
- "collimation" problem fixed
  problems when transmitting images from digitizer to Processing Station due to crashing collimation software (see FSB No. 2, DD+DIS250.00E)
- SUN OS patch introduced to prevent Processing Station from hanging up (Kernel patch 105181-23 or higher).

5 What's new in VIPS.1.1.09

- some improvements on the FL/FS stitched image quality
- image rotation possible on workstation for low memory non-MG3 printers => see printer definition files description.
- printer definition file installation via maintenance menu

6 Open Issues

- Paper formats of Solid InkJet are not supported yet.
- One field test site reported problems with the update of the UI. Image was missing and appeared then together with a later incoming image.
- One field test site reported a problem with printing annotations on the HCP (no reboot or UI reset was necessary).
- L and R sign not in local language.
- Licenses cannot be switched on in DEMO mode by means of the Maintenance Menu. => use "System Monitoring" module.
- Auto QC and test images can only be printed on 14" x 17" film. Test images cannot be sent to non-AGFA DICOM printers.
- Problem with recognizing license number. Message "Invalid license number" appears => Reset UI and enter number again.
- The film destination for FUJI printers is not detected correctly. The only known destinations are "MAGAZINE" and "PROCESSOR". FUJI needs "BIN_i", while "i" is the number of the tray.
- It is not possible to deactivate some film format buttons in the print browser.
- Rotation of an image in print UI when image is mirrored, is not correct.
- Only mg3-printers appear in the print browser in open mode.

7 Printer Set-Up for Smart Print

- To make full usage of Smart Print, you have to adapt your AGFA printer. The file pms.ini has to be created/modified. You have to add the following entry to this file.

```
[ADC_PS1]
IDF=C:/PMS2000.IDF
```

In the above example the AE-Title of the Processing Station is [ADC_PS1].
For each Processing Station which uses Smart Print you have to create these two lines in your pms.ini file.
Otherwise true size printing will not give true size on film.

Appendix A: Processing Station connection diagram

Please do not use the field service bulletin DD+DIS183.98E as it is wrong. Replace the corresponding page in that field service bulletin with this one.